

IMPERIAL ROAD DESIGN MANUAL
REVISIONS January 2008

CHAPTER 1D

- Page 1D-1 – Deleted all information in this chapter except for the link to the Project Development Flow Charts. This information has been incorporated into the Project Management Manual.

CHAPTER 2A

- Page 2A-1 – Deleted reference to IIM LD-183 under “PRELIMINARY ENGINEERING AUTHORIZATION”. Added “LOCATION CORRIDOR STUDY” and the following statement; “Location Studies are now the responsibility of Environmental Division. See L&D, Location Corridor Study Guide.”
- Page 2A-2 – Deleted all information under “EARLY PROJECT NOTIFICATION”. This information has been incorporated into the Project Management Manual.
- The following have been deleted and incorporated into the Project Management Manual; “PRELIMINARY SCOPING, PROJECT NUMBERS”, “REQUESTING STRUCTURES NUMBERS”, “REQUESTING ADDITIONAL PROJECT NUMBERS”, “REQUESTING A REVISION TO A PROJECT NUMBER”, “REQUESTING A REVISION TO A PROJECT DESCRIPTION”, “REQUESTING A REVISION TO THE PROJECT SCOPE”, “SECONDARY ROADS (ARTERIAL-COLLECTOR-LOCAL ROADS)”, “PROJECT PROGRESSION” and “AUTHORIZATION FOR LOCATION PUBLIC HEARING” and “BOARD APPROVAL”.
- Page 2A-4 – Rewrote the first sentence and deleted the last sentence under “SCHEDULING PROJECT WITH WORK LOAD”. From “*When a project is received by either the Preliminary Engineering Section or a Design Section, the Section Head will assign it to one of his/her groups. Care must be taken to review existing and possible future construction schedules to assure that the section being assigned the project has sufficient time and manpower*”. On Preliminary Engineering projects, consideration must be given to long range commitments to assure that the same section will continue the project through the Preliminary Field Inspection stage.” To “The Section Manager will assign the project to one of his/her groups. Care must be taken to review existing and possible future construction schedules to assure that the section being assigned the project has sufficient time and manpower”.

Included the following language under SETTING UP CORRESPONDENCE FILES; “All pertinent information at major milestones and other information deemed important by the Project Manager will be downloaded into iPM”.

- Page 2A-8 - The following have been deleted and incorporated into the Project Management Manual; “ARRANGING FIELD REVIEW (ON-SITE)”, “HOLDING ON-SITE REVIEW” and “PREPARATION OF REPORT”.
- Page 2A-11 - The following were deleted under “PROJECT SCOPING” and have been incorporated into the Project Management Manual; “POLICY”, SCOPING GROUP” and “SCOPING PROCESS”. Also included “Design Engineer” with “Project Manager” as for persons to seek design exception approval.

CHAPTER 2B

- Page 2B-4 – Deleted the following language from the first paragraph “as described in Section 2A - 4 - REQUESTING AND ASSEMBLING ADDITIONAL DATA.”
- Page 2B-8 – Deleted the following language under “COST ESTIMATES”; “(See IIM-LD-183)” in the first paragraph under “Cost Estimates”, and replaced the last sentence from “*The estimates are to be submitted to the Programming Division for the allocation of funds and entered into the PCES system within ten days, in accordance with the iPM manual.*” with “The estimates are to be entered into the PCES system.

Also deleted was the following; *The Project Manager reviews estimates (Preliminary Engineering and Construction) in iPM at Scoping, Public Hearing, Field Inspection, Right of Way and Construction Stages, as well as at 90-day intervals between these milestones, for accuracy. If a project is significantly modified between these stages, the estimate must be adjusted and entered into PCES.*

ALL Engineers’ Estimates (Preliminary Engineering and Construction) will be reviewed by the Project Manager and updated, if necessary, for use by the Programming Division and Local Assistance Division in preparing the SYIP. At this time it is imperative that ALL estimates be reviewed for accuracy before incorporation into the new SYIP. This information is now covered under Project Management Procedures.

- Page 2B-9 – Deleted “Section 2B-6 CONSTRUCTABILITY QUALITY REVIEW”. This information is now in Appendix “E”.
- Page 2B-10 – Deleted “SCHEDULING THE” from “PRELIMINARY FIELD INSPECTION”.

CHAPTER 2C

- Page 2C- 4 – Deleted the following under “FIELD RECONNAISSANCE”; (See Section 2A-5-FIELD REVIEW).

CHAPTER 2D

- Page 2D-1 – Replaced “designer’s” with “Lead Design Engineer”.
- Page 2D-2 – Deleted the following language under “RESPONSIBILITY”; “*The Location and Design Division will prepare study reports for all projects being prepared for Design Public Hearings.*” and “*Design study reports and informational brochures for Secondary projects are to be prepared by the designer.*”. Also included the following to the last sentence in conjunction with other team members. Added “Design and” to the beginning of the paragraph, and “in conjunction with other team members” at the end of the paragraph.

Deleted the following language under “PURPOSE OF REPORT OR BROCHURE”; “REPORT OR” in the title, and “*study reports*” in the first sentence and replaced “reports” with “brochures” in the second sentence.

Deleted the following language under “CONTENTS”; “and *study report*” from the first sentence.

- Page 2D-3 – Replaced “*Urban projects*” with “all projects” in last paragraph.
- Page 2D-4 – Deleted the following language under “RESPONSIBILITY OF THE PUBLIC INVOLVEMENT SECTION”; “*The Public Involvement Section is responsible for the processing and distribution of all public hearing data. The location site of the public hearing should be identified on this map if possible. It is also responsible for reviewing and assisting in the preparation and coordination of statements and visual aids for presentation and display at public hearing and meetings.*” and replaced it with “Please refer to the Public Involvement Manual”

Under “DATA REQUIRED FROM DESIGNER” replaced “DESIGNER” with “PROJECT MANAGER”. Deleted “*project designer*” and “*or Engineering Development and Project Management Section*” in the first paragraph. Replaced “designer” with “project manager” in the second and third paragraph and added “or his designee” after District Administrator in the third paragraph. Deleted “study report or” in the first sentence of the forth paragraph.

- Page 2D-5 – Deleted the following language under ‘PRE-PUBLIC HEARING MEETINGS’; “*Prior to a scheduled hearing, it may be desirable to hold an open*”

forum meeting. These open forum meetings will permit the public to review and discuss with Department and Municipal (or other) engineers and officials, particular points of concern to them and to become generally familiar with the project to be presented. Mosaics, typical sections and other displays to be presented at the public hearing should be available at this meeting, along with unapproved detailed plans.

A properly conducted pre-hearing meeting may eliminate a great number of questions which would otherwise be asked at the formal hearing and will convey a sense of mutual concern between the Department and the public. As many public hearings are held at night, a period of approximately two hours prior to the formal hearing should normally be provided for this discussion prior to the formal hearing.

If sufficient interest is anticipated, consideration should be given to holding the pre-hearing meeting on the night preceding the hearing; or, if the projects are controversial or of great magnitude, consideration should be given to holding one or more meetings approximately a week in advance of the formal hearing.” and replaced it with “Refer to section 3.0 Public Hearings of the Public Involvement Manual”.

- Page 2D-6 - Deleted the following language under; “NOTICE OF WILLINGNESS TO HOLD A PUBLIC HEARING”

RESPONSIBILITY

Requirements for a public hearing may be satisfied by a well-publicized notice of willingness to hold a public hearing. An opportunity to review the project plans and other information is given in this procedure. A public hearing is held if a written request is made and contact by VDOT cannot resolve questions.

Willingness to hold a public hearing may be posted on most Federal-Aid Secondary projects and some Federal-Aid Primary, Urban, and Interstate projects. Responsibility for initiation of the process is vested in the Local Assistance Division for Secondary and Urban Projects, and Location and Design Division for all other projects.

PROCEDURES

Until the Notice of Willingness to hold a public hearing expires, it must be assumed that a hearing will be required. The Department must have sufficient plans, maps and other information concerning the proposed project available for public review in the District and Residency offices. If a public hearing is requested, a study report or informational brochure (as well as other necessary displays such as mosaics) will be prepared for use at the hearing.

PUBLISHING NOTICE OF WILLINGNESS TO HOLD A PUBLIC HEARING

The Public Involvement Section, upon receipt of all the required data, will prepare the public notice and arrange for proper advertisement of the

Department's willingness to hold a public hearing. The notice is to be published subsequent to the preparation of the appropriate environmental document on Federal-Aid projects.

NO REQUEST FOR PUBLIC HEARING

If no requests for a public hearing are received within the time limit given in the notice, a hearing is not required and the public hearing requirements are then considered to be satisfied.

The District Location and Design Engineer will write a memorandum to the appropriate Assistant State Location and Design Engineer requesting approval with the following statement at the bottom of the letter for approval signature:

"Approval is hereby given to the Location and Major Design Features for this project."

By: _____
Assistant State Location and Design Engineer

A copy will be sent to the Environmental Engineer, who will then prepare the Final Environmental Document.

Following approval of location and major design features and the FHWA approval of the Final Environmental Document, the project may be advanced to the right of way stage.

REQUEST FOR PUBLIC HEARING

In some instances, a request for a public hearing is simply a request for information. Unless a large number of requests are received, it may be desirable for a Department official to discuss the project with the person(s) making the request to determine if the question can be answered without a public hearing. If all questions or problems can be resolved to everyone's mutual satisfaction, the Department can ask for written correspondence rescinding the request and this will satisfy the public hearing requirements.

In the event that written correspondence cannot be obtained rescinding the request, a hearing will be held. The procedures in Section 2D-3-PREPARATION AND PROCESSING OF PUBLIC HEARING thru 2D-7-PREPARATION OF ENGINEERING COMMENTARY and Section 2D-13-CONDUCTING THE PUBLIC HEARING thru 2D-14 -(RESOLUTION OF PUBLIC HEARING QUESTIONS) is to be followed. and replaced it with; "Refer to section 3.0 Public Hearings of the Public Involvement Manual".

- Page 2D-7 – Deleted the following language under “ESTABLISHING TIME AND LOCATION”; *“It is the District Administrator's responsibility to determine a time and place, allowing a minimum of sixty days in advance for the hearing, upon request from the Location and Design or Local Assistance Division. If a*

pre-hearing meeting is to be held, the time and place of this meeting is also scheduled and the Location and Design or Local Assistance Division so advised.

Upon notification of the time and location of the hearing, the designer or project manager will advise the Public Involvement Section so that they may prepare the public notice and arrange for proper advertisement of the hearing.” and replaced it with; Refer to Appendix C Public Hearings of the Public Involvement Manual

- Page 2D-27 – Deleted the following Language under “CONSTRUCTLBLITY QUALITY REVIEW”; *Constructability review is defined as the review of plans, specifications, and contract documents from a construction perspective to assure the documents propose an operation that is efficient, cost effective, and buildable. Its emphasis is primarily focused on “how” the documents propose the operation to be built and not on ”what” gets built.*

AASHTO defines constructability review as “a process that utilizes construction personnel with extensive construction knowledge early in the design stages of projects to ensure that the projects are buildable, while also being cost-effective, biddable, and maintainable”.

This analysis is normally performed at the Preliminary Field Inspection, Public Hearing, Field Inspection and Pre-Advertisement stage of plan development. Additional reviews can be performed as needed when the plans are further developed.

The constructability review includes the report of findings, a completed checklist, and cost savings report. This report is a detailed tabulation of any anticipated savings identified during the review. And made reference to see Appendix C for this information.

- Page 2D-31 – Replaced “Right of Way Re-evaluation” with “Right of Way Quality Control Review” in sentence 3 and 6, also added (EQ-201) to sentence 6.

CHAPTER 2E

- Page 2E-25 – Replaced “on From PD-3” with “in the Scoping Report” in the first sentence under SIDEWALK.
- Page 2E-73 – Deleted the following language under “PROCEDURE AND SCHEDULING” **PROCEDURE AND SCHEDULING**
The field inspection is scheduled by the District Administrator who will arrange to have the plans reviewed, appropriate staff attend, and reports submitted by the appropriate divisions. A Project Engineer or Senior Inspector and a maintenance representative should be present to address project constructability and maintenance aspects and submit written reports.

Field inspections on urban projects will be scheduled by the Local Assistance Division in conjunction with the district office. A memorandum of confirmation is then sent to the Local Assistance Division. All appropriate parties will be advised by memorandum as to the time and location of the field inspection. Always advise the State Construction Engineer.

Copies of the applicable form (LD-99-I for rural projects, LD-99U for urban projects, or LD-103(SEC) for secondary projects) are attached to the field inspection prints and distributed in accordance with IIM-LD-68. Form LD-99-I(NV), LD-99-U(NV) or LD-103(NV)(SEC) are available for use on projects designed for the Northern Virginia District. Notice of the location and availability of prints (via Falcon) should be furnished at least two weeks prior to the scheduled field inspection.

- Page 2E-75 – Deleted all language under “HOLDING THE FIELD INSPECTION”. *The Field Inspection is presided over by the District Administrator or his/her representative, usually the District Construction Engineer.*

A representative from the Design and Hydraulics Sections will attend every applicable field inspection with a set of prints reflecting all questions shown on the set supplied the District Administrator and any additional specific questions or comments necessary. The number of representatives is to be held to a minimum.

An experienced project inspector should be present to review a project for constructability and plan clarity. Also, someone should be in attendance who can address the maintenance aspects.

Review comments received prior to Field Inspection (e.g. Transportation & Mobility Planning, Traffic Engineering, Rail, etc.) are to be addressed at the Field Inspection or in a subsequent report.

All questions are to be completely legible and concisely answered on the office prints. The Location and Design representative is to return to the office with a complete understanding of all items discussed.

If an item is not addressed or a question not answered to the representative's satisfaction, it is his/her responsibility to make this known and to bring all items and questions to a satisfactory conclusion.

If any controversial item remains unresolved, the Location and Design Division representative, upon his/her return to the office, is to prepare a memorandum to the appropriate Assistant State Location and Design Engineer and District Construction Engineer giving complete details of the situation.

All projects shall be reviewed on the site. All necessary safety equipment and precautions shall be utilized.

Reports from the District Materials, Traffic Engineering, Right of Way and Environmental Divisions, letters from municipalities, etc., are to be submitted to the District Administrator's representative, usually the District Location and Design Engineer. For projects managed in the Central Office the District Administrator/District Construction Engineer forwards the reports and a set of prints marked with comments to the State Location and Design Engineer within fourteen days in accordance with Form LD-99.

The Local Assistance Division submits a report on urban projects to the State Location and Design Engineer.

On consultant designed projects, the consultant shall prepare minutes of the Field Inspection and forward copies to individuals responsible for preparing reports.

The Project Manager will respond to the District Administrator or Urban Engineer outlining how plan development will proceed.

After the various Field Inspection reports are received, all necessary rulings on controversial questions are to be resolved and recommendations incorporated into the plans.

The Project Manager will respond to the Local Assistance Division Administrator for Urban Projects and the District Administrator or District Construction Engineer for all other projects with a resolution of all field inspection comments. Copies of this response which should include an explanation of reasons recommendations were not included in plans should be sent to all concerned.

SUPPLEMENTAL FIELD INSPECTION

If a project is not worked on (shelved) for 12 months or more a Supplemental Field Inspection shall be held. The same procedures shall be followed for the Supplemental Field Inspection as for the initial Field Inspection. In particular, all projects shall be reviewed on the site.

Page 2E-77 - Deleted all language under “REQUEST FOR SPECIAL PROVISIONS”;

When a Project Manager is aware of the need for a Special Provision, the Project Manager will coordinate with the Scheduling and Contract Division as soon as possible.

If any doubt exists as to whether a given decision affects a bridge, the Structure and Bridge Division should be contacted informally and if a bridge is affected, a copy of the Field Inspection Report shall be sent them by memorandum explaining the facts.

Page 2E-80 - Replaced “Project Manager” with “Lead Design Engineer” in the third paragraph under “UTILITY FIELD INSPECTION”.

CHAPTER 2F

- Page 2F-5 – Revised activity numbers under “CERTIFICATION ACCEPTANCE” to remove alpha characters.

CHAPTER 2G

- Page 2G-11 - Added the following language under “SPECIAL DESIGN BRIDGES”; “Beginning with the September 1, 2008 Advertisement Date the bridge approach slab detail sheet and quantities will be the responsibility of the bridge designer and will no longer be included in the roadway plan assembly.”
- Page 2G-14 – Deleted the following language under “PREPARATION FOR CONSTRUCTION COST ESTIMATE”; “*The Project Manager reviews estimates (Preliminary Engineering and Construction) in iPM at Scoping, Public Hearing, Field Inspection, Right of Way and Construction Stages, as well as at 90-day intervals between these milestones, for accuracy. If a project is significantly modified between these stages, the estimate must be adjusted and entered into iPM and PCES.*”

ALL Engineers’ Estimates (Preliminary Engineering and Construction) will be reviewed by the Project Manager and updated, if necessary, for use by the Programming Division and Local Assistance Division in preparing the SYIP. At this time it is imperative that ALL estimates be reviewed for accuracy before incorporation into the new SYIP. This information has been incorporated into the Project Management Manual.

- Page 2G-17 thru 19 - The following have been deleted and incorporated into the Project Management Manual; “PRE-ADVERTISEMENT CONFERENCE”, “PREPARATION OF PLAN FOR CONSTRUCTION”, “DATA REQUIRED FOR PLAN COORDINATION REVIEW” and
- Page 2G-21 - The following have been deleted and incorporated into the Project Management Manual; “ADVERTISEMENT SUBMISSION OF APPROVED PLANS.

APPENDIX “A”

- Page A-5 – Revised “Footnote” number 5 to read “14’ Shoulders may be reduced to 10””.
- Page A-6 – Revised column in chart from; “Min. Width of Graded Shoulders” to “Min. Width of Total Shoulders (Graded & Paved)”. Deleted column for “Passing Sight Distance” and added the following note; For Passing Sight Distance Criteria See Current AASHTO Green Book.

- Page A-7 – Revised “Footnote No. 4” to add the following language; “with ADT >2000”. Deleted column for “Passing Sight Distance” and added the following note; For Passing Sight Distance Criteria See Current AASHTO Green Book.
- Page A-8 – Revised “Footnote No. 3” to add the word “by” after “decreased”. Deleted column for “Passing Sight Distance” and added the following note; For Passing Sight Distance Criteria See Current AASHTO Green Book.
- Page A-9 – Revised column in chart from; “Min. Width of Graded Shoulders” to “Min. Width of Total Shoulders” and from “Paved Shoulder Width” to “Buffer Strip Width”. Also deleted Footnote No. 15.
- Page A-10 – Revised column in chart from; “Paved Shoulder Width” to “Buffer Strip Width”. Also deleted Footnote No. 13.
- Page A-11 – Revised column in chart from; “Paved Shoulder Width” to “Buffer Strip Width”. Also deleted Footnote No. 12.
- Page A-13 - Deleted column for “Passing Sight Distance” and added the following note; For Passing Sight Distance Criteria See Current AASHTO Green Book.
- Page A-29 – Revised the definition of low speed from 40 mph to 45 mph in the second paragraph.
- Page A-98 & A-99 – Updated list of associated cities and airports.

APPENDIX “B”

- Page B-17 – Added the following language to the first sentence under Section b: “for Roadway Section Criteria.”
- Page B-21 – Replaced “through” with “or” between CG-9B and CG-9D.
- Page B-47 – Replaced in the first paragraph; “*Private Subdivision Road/Street Entrance sheet of the Minimum Standards of Entrances to State Highways.*” with “CG-11 and be a minimum width of 20 feet measured from face of curb to face of curb with a minimum radius of 12.5 feet. However, the selected radius shall accommodate the anticipated type of vehicle usage.”

APPENDIX “C”

- Page C-4 – Added the following language under “LEFT-TURN LANES”: “In general, when left-turn volumes are higher than 100 vph, an exclusive left-turn lane shall be considered.”

- Page C-39 – Revised “Accessible Route” width from 3 feet to 4 feet in the ACCESSIBLE PARKING AND PASSENGER LOADING ZONES detail.
- Page C-76 – Revised language in item number 2 from; “*the State Traffic Engineer is to request the Project Manager to request a UPC number in IPM.*” to “the State Traffic Engineer requests the Project Sponsor to initiate the project in Project Pool.”